WESTERN GROWERS®

Fresh produce from our families to yours

2015 International Workshop on Evapotranspiration Mapping for Water Security

How can growers use ET information in irrigation management?

Opportunities and Challenges

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OUTLINE

- Background
- Irrigation Management & Irrigation Efficiency
- Evapotranspiration (ET) in irrigation management
- Opportunities/Challenges

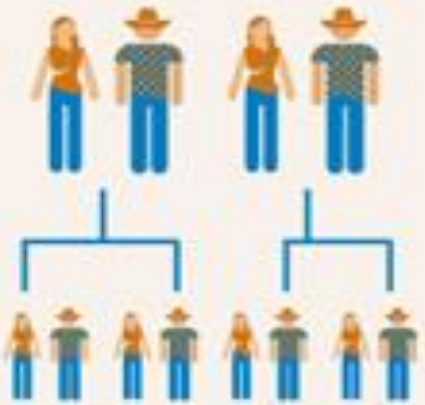
About Western Growers

fresh fruit & vegetables 50%

organic fresh produce 1/3

We are multi-generational FAMILY FARMERS

tree nuts 99%

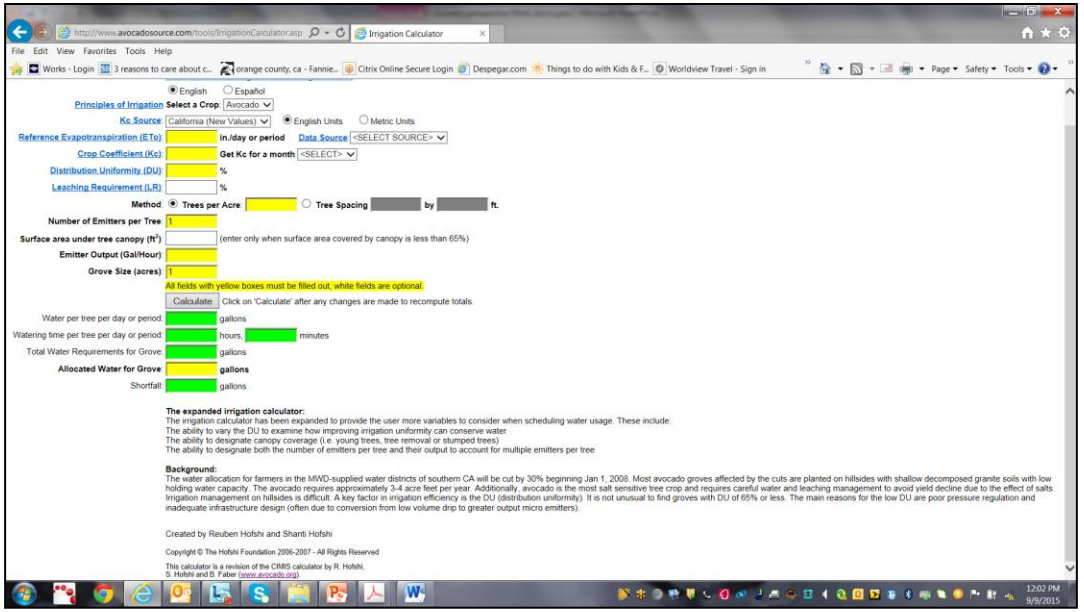


Irrigation Management

- Every irrigation system has advantages and disadvantages (surface, sprinkler and drip)
- In California, Arizona and Colorado a combination of irrigation systems is primarily used
- Irrigation management impacted by local/regional/state differences – don't assume it is straightforward

Irrigation Efficiency

- Proper management of existing systems (in some cases replacing current systems)
- Using irrigation scheduling (when and how much to irrigate)



ET in irrigation management

- ET is one tool in the toolbox
- Producers not utilizing ET may not be aware of what it is and how to use it
- Producers utilizing ET may have more comprehensive irrigation management systems
- Real-time ET could be of greater benefit for many producers (not subject to water orders)

ET in irrigation management

- Great reference for irrigation scheduling
- Other considerations: moisture levels, weather conditions, crop stage, soil texture, field observations and experience
- Irrigation volume determined by ET and other considerations

Use of ET

Challenges

- ET data gaps due to lack of local/ representative weather stations in certain locations
- Lack of local commodity specific irrigation scheduling calculators (Real-time crop, regional/site specific conditions should be considered when using ET)

Opportunities

- ET data enhancement. For example, CIMIS * is utilizing remotely sensed satellite data to generate ETo maps and address data gaps.
- Support/continue successful efforts that consider crop, regional/site specific conditions (irrigation calculators for avocados, lettuce, almonds, wine grapes)

*** California Irrigation Management Information System (CIMIS)**

Use of ET

Challenges

- Lack of awareness and understanding of how to use ET
- ET and other irrigation support data comes from different sources (different equipment and controls)

Opportunities

- Potential outreach/training efforts to increase access/ use ET in irrigation management
- Integrating ET and other irrigation support data into other agricultural management tools and reporting systems (a more comprehensive platform)

Use of ET

Challenges

- Lack of technical assistance to utilize ET and other irrigation tools
- The use of ET and more sophisticated tools in irrigation management requires qualified operators

Opportunities

- Technical assistance to utilize different irrigation tools including ET
- Potential outreach/training activities

Conclusions

- Irrigation decisions are impacted by several factors, which also influence the use of ET in irrigation management

- ET is one tool in the toolbox. The better the tool, the better the outcome

- There are opportunities for outreach/research (lack of awareness, need to have a single platform to utilize ET/other support tools)